CLAIMS:

1. Display driver control circuitry for controlling a display driver for an electroluminescent display, the display comprising at least one electroluminescent display element, the driver including at least one substantially constant current generator for driving the display element, the control circuitry comprising:

a drive voltage sensor for sensing a voltage on a first line in which the current is regulated by said constant current generator; and

a voltage controller coupled to said drive voltage sensor for controlling the voltage of a supply for said constant current generator in response to said sensed voltage, and configured to control said supply voltage to increase the efficiency of said display driver.

2. Display driver control circuitry as claimed in claim 1, wherein said voltage controller is configured to reduce said supply voltage when this will not substantially reduce said regulated current and/or said display brightness.

3. Display driver control circuitry as claimed in claim 2, wherein said voltage controller is configured to control said supply voltage such that said constant current generator operates in the vicinity of its compliance limit.

4. Display driver control circuitry as claimed in claim 3, further comprising means to determine a compliance limit for use by said voltage controller.

5. Display driver control circuitry according to any one of claims 1 to 4 further comprising a supply voltage sensor for sensing said supply voltage, and means to determine a difference between said supply voltage and said first line voltage, and wherein said voltage controller is configured to control said supply voltage responsive to said difference.

6. Display driver control circuitry according to any one of claims 1 to 4 wherein said display has a plurality of electroluminescent display elements, and wherein said display driver has a plurality of substantially constant current generators for

simultaneously driving said plurality of display elements, each said constant current generator being configured for regulating the current on an associated display drive line, the display driver control circuitry further comprising a drive voltage sensor for sensing the voltage on each said display drive line, and wherein said voltage controller configured to control said supply voltage responsive to the sensed voltage on a said drive line having a maximum voltage of said drive line sensed voltages.

7. Display driver control circuitry according to claim 6 further comprising a supply voltage sensor for sensing said supply voltage, and means to determine a difference between said supply voltage and said maximum voltage, and wherein said voltage controller is configured to control said supply voltage responsive to said difference.

8. Display driver control circuitry according to either claim 6 or 7 wherein said display comprises a passive matrix display, and wherein said voltage controller is configured to control said supply voltage on a frame-by-frame basis.

9. Display driver control circuitry according to either claim 6 or 7 wherein said display comprises a passive matrix display having a plurality of rows of display elements, and wherein said voltage controller is configured to control said supply voltage on a row-by-row basis.

10. Display driver control circuitry according to any preceding claim wherein said display has at least one control line for controlling the illumination of said at least one electroluminescent display element, wherein said drive voltage sensor is configured to sense the voltage on said display control line, and wherein said voltage controller has an output for controlling an adjustable power supply configured for providing said supply voltage.

11. A display driver including the display driver control circuitry of any one of claims 1 to 10.

12. Display driver control circuitry as claimed in any preceding claim wherein said electroluminescent display element comprises an organic light emitting diode.

13. A method of reducing the power consumption of a display driver driving an electroluminescent display, the display comprising at least one electroluminescent display element, the driver including at least one substantially constant current generator for driving the display element and having a power supply for supplying power at a supply voltage for said current generator, the method comprising:

sensing a voltage on a first line coupled to the current generator, the current in which first line is regulated by the current generator; and

controlling said supply voltage responsive to said sensed voltage to reduce said supply voltage when a reduction may be made without substantially altering said regulated current.

14. A method as claimed in claim 13, wherein said controlling controls said supply voltage such that said current generator operates at or near its compliance limit.

15. A method as claimed in claim 14, the method further comprising determining said current generator compliance limit for use in said controlling.

16. A method as claimed in claim 13, 14 or 15, the method further comprising:

sensing a voltage on a second line, the voltage on said second line being dependent upon said power supply voltage; and

determining a voltage difference between the voltage sensed on said first and second lines; and

wherein said controlling is responsive to said voltage difference.

17. A method as claimed in claim 13, 14 or 15, wherein said display comprises a plurality of simultaneously driveable electroluminescent display elements each being driven by a said substantially constant current generator, each said substantially constant current generator having an associated drive line the current in which is regulated by the current generator, the method further comprising:

sensing the voltage on each said associated drive line; and

controlling said supply voltage responsive to said sensed voltage to reduce said supply voltage when a reduction may be made without substantially altering the regulated current in a said associated drive line having a maximum sensed voltage.

18. A method according to claim 17 further comprising:

sensing a voltage on a further line, the voltage on said further line being dependent upon said power supply voltage; and

determining a voltage difference between the voltage sensed on said further line and said maximum sensed voltage; and

wherein said controlling is responsive to said voltage difference.

19. A method as claimed in any one of claims 13 to 18 wherein said display has at least one control line for controlling the illumination of said at least one electroluminescent display element, wherein said driver drivers said control line, and wherein said sensing comprises sensing a voltage on said control line.

20. A method according to any one of claims 13 to 19 wherein a said substantially constant current generator comprises a current source.

21. A method according to any one of claims 13 to 19 wherein a said substantially constant current generator comprises a current sink.

22. A method according to any one of claims 13 to 21 wherein said display comprises a passive matrix display having a plurality of electroluminescent display elements and a plurality of row electrodes and a plurality of column electrodes for addressing said display elements, and wherein said driver is coupled to at least one of said plurality of row electrodes and said plurality of said column electrodes for driving said display.

23. A method according to claim 22 wherein said sensing and controlling is performed on a row-by-row basis.

24. A method according to claim 22 wherein said sensing and controlling is performed on a frame-by-frame basis.

25. A method according to any one of claims 13 to 24 wherein a said electroluminescent display element comprises organic light emitting diode.

26. A carrier carrying processor control code to implement the method of any one of claims 13 to 25.

27. Display driver circuitry configured to implement the method of any one of claims 13 to 25.